

Docket JP920000411US1

Appl. No.: 09/783,250
Filed: February 14, 2001

REMARKS

1. Posture of the Case

The first Office action in the present case rejected all claims, relying on one reference for the rejection of certain ones of the claims, including the independent claims, U.S. Patent 6,067,639 (Rodrigues), and an additional reference, U.S. Patent 5,860,009 (Uchihira), for all of the remaining claims, except claim 16. The first Office action relied upon the combination of Rodrigues and another reference, U.S. Patent 6,067,639 (Grey), for rejection of claim 16. Applicant responsively amended certain claims in a Reply A.

A first final Office action cited an additional reference, U.S. Patent 6,173,440 (Darty), in combination with Rodrigues, for the rejection of the independent claims and certain others of the claims. The first final Office action withdrew application of Grey. Applicant filed a Notice of Appeal, then an Appeal Brief of August 14, 2004.

A second final Office action, dated December 7, 2004, reopened prosecution, withdrawing the Rodrigues reference for the rejection of the independent claims and certain others of the claims, instead asserting a new reference, Telcordia Software Visualization and Analysis Toolsuite User's Manual, Chapter 3, ATAC: Overview (ATAC), in combination with Darty. The second final Office action applied the combination of Darty, ATAC, and Rodrigues for the rejection of some of the remaining claims, and stated that claims 13, 29, & 42 were allowable if written in independent form incorporating all the elements and limitations of their respective base claims. Applicant filed a Request for Reconsideration on January 4, 2005, asserting that the rejections and the finality of the second final Office action were improper.

Applicant subsequently withdrew the Request for Reconsideration and amended the claims, in order to put them in condition for allowance. This was in reliance upon, and in accordance with, the indication of allowability in the second final Office action. Specifically, Applicant amended claims 13, 29, & 42 to put them in independent form, incorporating all the elements and limitations of their base claims; canceled claims 1, 2, 4, 18, 19, 21, 31, 32, & 34; and amended claims 3, 5, 9, 15-17, 20, 22, 25, 33, 35, 38, 44, & 45 so that each one of them is dependent on one of claims 13, 29, & 42. However, an Advisory Action of April 6, 2005, recanted the indication of allowability, citing no new grounds for rejection.

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In reply to the Advisory Action, Applicant requested in a written request of June 2, 2005, and in numerous telephone conversations prior to that written request, that a new, non-final Office action be issued, and that the period for reply be restarted in the new Office action. The present Office action is responsive to that request. The present Office action essentially repeats the rejections of the second final Office action, but reapplies Grey in combination with certain ones of the other references for rejection of some of the claims.

2. Specific Rejection in the Present Office Action

Claims 3, 5, 6, 9, 13, 15, 16, 20, 22, 23, 25 and 29 stand rejected under 35 USC 103(a) as being unpatentable over Darty, in view of ATAC. Claims 10-12, 14, 17, 26-28 and 30 stand rejected under 35 USC 103(a) as being unpatentable over Darty, in view of ATAC, and further in view of Rodrigues. Claims 7, 8 and 24 stand rejected under 35 USC 103(a) as being unpatentable over Darty, in view of ATAC, and further in view of Uchihira. Claims 33, 35-38, 40-43 and 45 stand rejected under 35 USC 103(a) as being unpatentable over Darty, in view of ATAC, and further in view of Grey. Claims 39 and 44 stand rejected under 35 USC 103(a) as being unpatentable over Darty, in view of ATAC, Grey, and Rodrigues.

3. Applicant's Arguments

A. Darty does actually not teach or suggest the purported teachings relied upon for the rejection of claims 13, 29 and 42.

i) Darty does not teach or suggest that "every statement in the program belongs to at least one of the groups."

Claim 13 of the present application states that the method includes "dividing said program into a plurality of groups such that *every statement in the program belongs to at least one of the groups*" (emphasis added). (Claims 29 and 42 have similar language, according to the respective forms of the invention they claim.) With regard to element 102 in FIG. 3A, Darty merely teaches that "lines of the program to be tested are grouped into functional blocks." Darty, col. 9, lines 39-41. This does not teach or suggest that *all* lines of the program are grouped into blocks. To the contrary, Darty shows a "Program ABC" in Text Layout 2, that is divided into three blocks, wherein some of the statements of the program are clearly and explicitly shown as *not* belonging to any of the three blocks. Darty, column 5, lines 30-40. Thus, it is clear that

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Darty's statement "lines of the program to be tested are grouped into functional blocks" should be interpreted as meaning that in the program to be tested, *some, but not all*, lines are grouped into functional blocks. Thus, Darty clearly does not teach "dividing said program into a plurality of groups such that every statement in the program belongs to at least one of the groups," as claimed in the present application.

ii) Darty does not teach or suggest "enabling a tester to execute said unexecuted groups such that said tester can ensure that all statements in said program are executed at least once."

Claim 13 of the present application also states that the method includes "an extra statement in each of said groups, wherein execution of such an extra statement enables said determining in step b) [i.e., determining the ones of the groups that are executed when said program is executed while testing said program.] to identify an executed one of the groups corresponding to said extra statement." (Regarding the above statement and the following discussion, it should be understood that claims 29 and 42 have similar language, according to the respective forms of the invention they claim.) It follows that identifying the *executed* ones of the groups enables identifying the *unexecuted* groups. In other words, as stated in claim 13 of the present case, the method includes "indicating unexecuted ones of the groups based on the ones of the groups that were determined in step b) to have been executed." It further follows that identifying the unexecuted groups enables *executing* any such unexecuted group. In other words, as stated in claim 13 of the present case, the method includes "enabling a tester to execute said unexecuted groups." Furthermore, in the present case "groups" have the property that "every statement in the program belongs to at least one of the groups." It therefore follows, as a specific consequence of this property, that once any *unexecuted* groups are executed, *all lines in the programs will have been executed at least once*. See, first paragraph of Detailed Description of the Preferred Embodiments of the present application ("A testing program provided according to an aspect of the present invention divides each program in a class into multiple groups, with each group containing a sequence of program lines such that one can be certain that all the program lines of the group will be executed if one of the lines is executed, but for the occurrence of some abnormal condition. As a tester tests the programs in the classes, the testing program keeps track of the groups which have been executed. By ensuring at least one statement in all groups is executed, the tester can ensure that all

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lines in the programs are executed at least once.”) In other words, as stated in claim 13 of the present case, enabling the tester to execute said unexecuted groups produces a result “such that said tester can ensure that all statements in said program are executed at least once.”

The Final Office Action contends that Darty, Figure 3d, steps S150, S153, S155, S160 and S148 somehow teach “enabling a tester to execute said unexecuted groups such that said tester can ensure that all statements in said program are executed at least once,” as claimed. But Darty does not teach that groups, blocks, or any other such thing, have the property that “every statement in the program belongs to at least one of the groups” so that “indicating unexecuted ones of the groups based on the ones of the groups that . . . have been executed . . . enabl[es] a tester to execute said unexecuted groups such that said tester can ensure that all statements in said program are executed at least once,” as claimed in the present case.

Applicant has carefully reviewed Darty’s description of Figure 3d, steps S150, S153, S155, S160 and S148, with particular scrutiny on Darty, column 11, line 55 - column 12, line 41, and respectfully submits that Darty simply does not teach or suggest what is claimed. Darty teaches at column 11, line 59-60, that there may be a test point associated with each block of code for one embodiment. Nevertheless, if none of the test points indicate “fail,” or even if all of the test points indicate “pass,” nothing taught by Darty suggests that somehow this indicates all statements in the program are executed at least once, as claimed. It appears that Darty concerns detecting whether there are errors in a program. For example, Darty states, “At step S153, the method of the present invention inspects the fault isolation set matrix to determine whether any entries exist therein. If the set matrix is empty, the method ends.” Darty, column 12, lines 22-25. The issue of whether all statements in the program are executed at least once simply does not arise in the context of Darty’s teachings.

B. Darty actually teaches away from the teaching that ATAC is relied upon for and therefore there is no suggestion or motivation for the combination of Darty and ATAC.

Even further, the Final Office Action must provide a legitimate basis for the suggestion or motivation to combine the references, as required for a rejection of this kind. MPEP 2143.01 (“Suggestion or Motivation To Modify the References”). However, Darty actually *teaches away* from the teaching for which ATAC is relied upon, i.e., that “each of said groups contains a respective sequence of ones of the statements such that all the statements of such a group are

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executed if at least one statement of said group is executed, and wherein such a group is deemed to be executed if at least one of the statements of the group is executed when the program is executed." Thus the desirability of combining Darty and ATAC is not suggested. MPEP 2143.01 (citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) regarding the point that just because references *can* be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination).

Darty states that test points are "strategically placed" so that a block of code that is the "most probable" source of a failure may be identified, "depending on the number and placement of test points." Darty, col. 9, lines 24-38; see also col. 10, lines 3-10. This is contrary to the claims in the present application, that every line of code is assigned to a block and execution of every block is ensured. If Darty taught that every line was assigned to a block and every block was executed, then Darty would not discuss probabilities about which one of the blocks gives rise to an execution failure. Darty teaches that a particular section of bad code may not be conclusively identified by the pass/fail status of Darty's test points. In discussing fault isolation, Darty teaches fault isolation is done by correlating "test points" with "dependency sets," which includes a process of determining which dependency sets contain test point failures in progressive succession from larger to smaller dependency sets, and then comparing which sets have failures in order to converge on a "smallest fault isolation set." Darty, column 14, lines 51-67. A single block having a fault might not be conclusively identified. Darty, column 15, lines 54-61; column 18, lines 60-67. Thus, the combination of Darty with ATAC is not indicated for the teachings asserted in the Office action.

C. The new ground of rejection introduced by the ATAC reference should be withdrawn because it has not been shown to fully meet at least one claim, or meet it except for differences shown to be completely obvious.

In the Office action of March 10, 2004, i.e., the action immediately preceding Applicant's Appeal Brief, claims 1-6, 9-15, 17-23, 25-36 and 38-44 were rejected on the basis of the combination of Darty and Rodrigues. Upon reopening prosecution, claims 13, 29 and 42 were initially indicated as allowable, but then claims 13 and 29 were rejected on the basis of the combination of Darty and ATAC and claim 42 was rejected on the basis of the combination of Darty, ATAC and Grey. This clearly indicates that claims 13, 29 and 42 are allowable over the

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combination of Rodriguez and Darty, the references previously relied upon for rejecting these claims prior to Applicant's Appeal Brief.

When an Examiner has become convinced a previously rejected claim is allowable over prior grounds of rejection, the claim should be allowed, except for certain limited situations in which the claim may be subjected to a new ground of rejection. MPEP 706.7(e) ("The examiner may withdraw the rejection of finally rejected claims. If new facts or reasons are presented such as to convince the examiner that the previously rejected claims are in fact allowable . . . , then the final rejection should be withdrawn. "Although it is permissible to withdraw a final rejection for the purpose of entering a new ground of rejection, this practice is to be limited . . . "). The exception applies, that is, a new grounds of rejection is proper instead of allowance, when a certain test is met. MPEP 706.7(e) (" . . . this practice is to be limited to situations where a new reference either fully meets at least one claim or meets it except for differences which are shown to be completely obvious.").

The newly cited reference, ATAC, does not fully meet at least one claim nor do so except for differences shown to be completely obvious. The present Office action does not even *contend* that ATAC meets this test, and presents no arguments to make this showing. Therefore, the entering of this new ground of rejection is contrary to the stated procedure of MPEP 706.7, cited above, and should be withdrawn.

D. Claims 3, 5, 6-12, 14-17, 20, 22-28, 30, 33, 35-41, and 43-45 are allowable at least because they depend on respectively allowable independent claims.

For the above reasons, Applicant contends independent claims 13, 29 and 42 are allowable over the cited art. Further, claims 3, 5, 6-12, 14-17, 20, 22-28, 30, 33, 35-41, and 43-45 are allowable at least because they depend on respectively allowable independent claims. MPEP 2143.03 ("If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious," citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

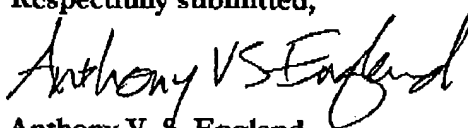
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REQUESTED ACTION

Applicant contends that the invention as claimed in accordance with previous amendments is patentably distinct, and hereby requests that Examiner grant allowance and prompt passage of the application to issuance.

Respectfully submitted,



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